

Multicast to the Browser

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IETF 110 mboned, 2021-03-11, status update

draft-ietf-mboned-dorms

draft-ietf-mboned-cbacc

draft-ietf-mboned-ambi

draft-ietf-mboned-mnat

Outline

- Trial Status & Key Insights
- Benefit Analysis (preview)
- Implementation Status
- Doc Updates & Next Steps

Trial Status (ongoing)

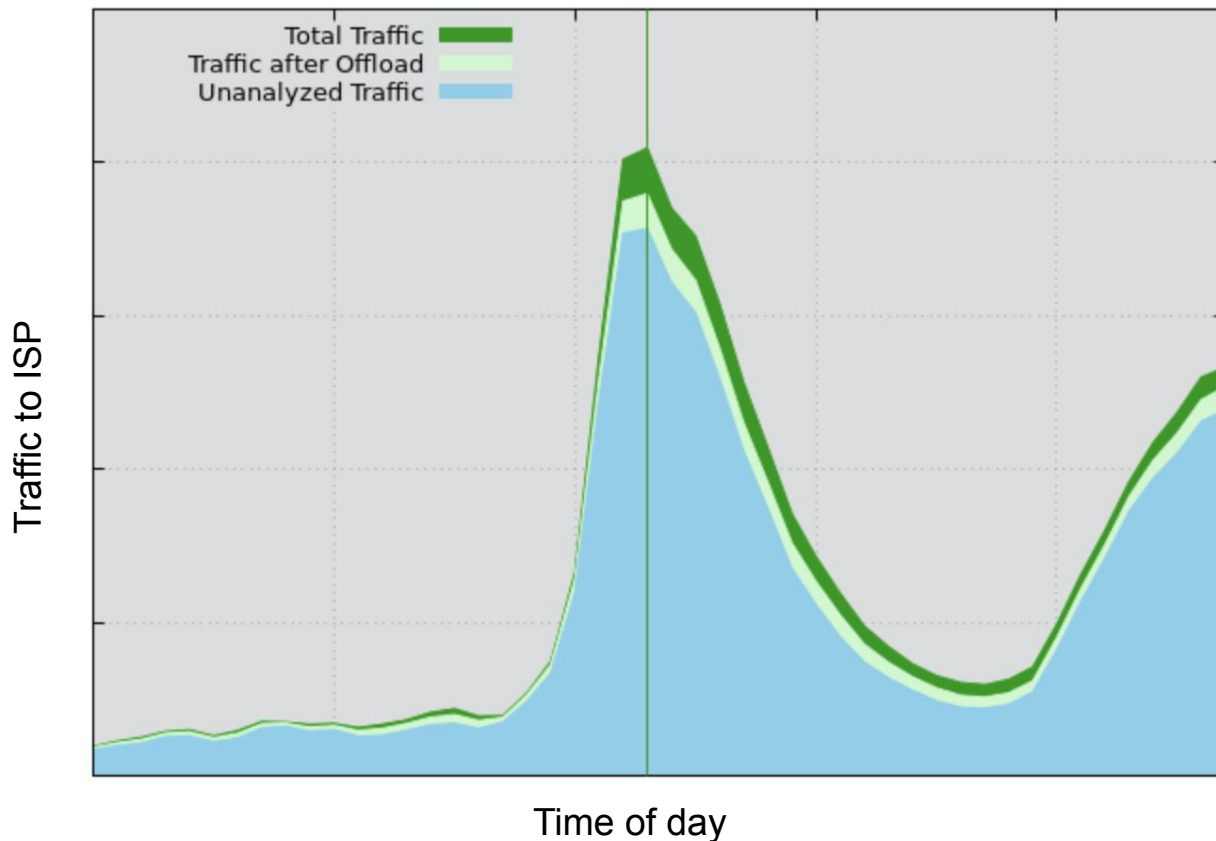
- [Ingest platform](#) running in 6 ISP labs
- Video feeds from 4 geo-local content owners
- File download testing with linux distro ISOs

- Some feedback received
 - Thanks Virgin Media!
- Most trials still active, a few still pending

Key Trial Insights

- MNAT needed more often than we realized
- Game downloads == biggest driver
- Cautious optimism looks justified
 - external ingest can be feasibly leveraged for offload
 - (even when it's slow)

Offload Potential (Ongoing Eval)

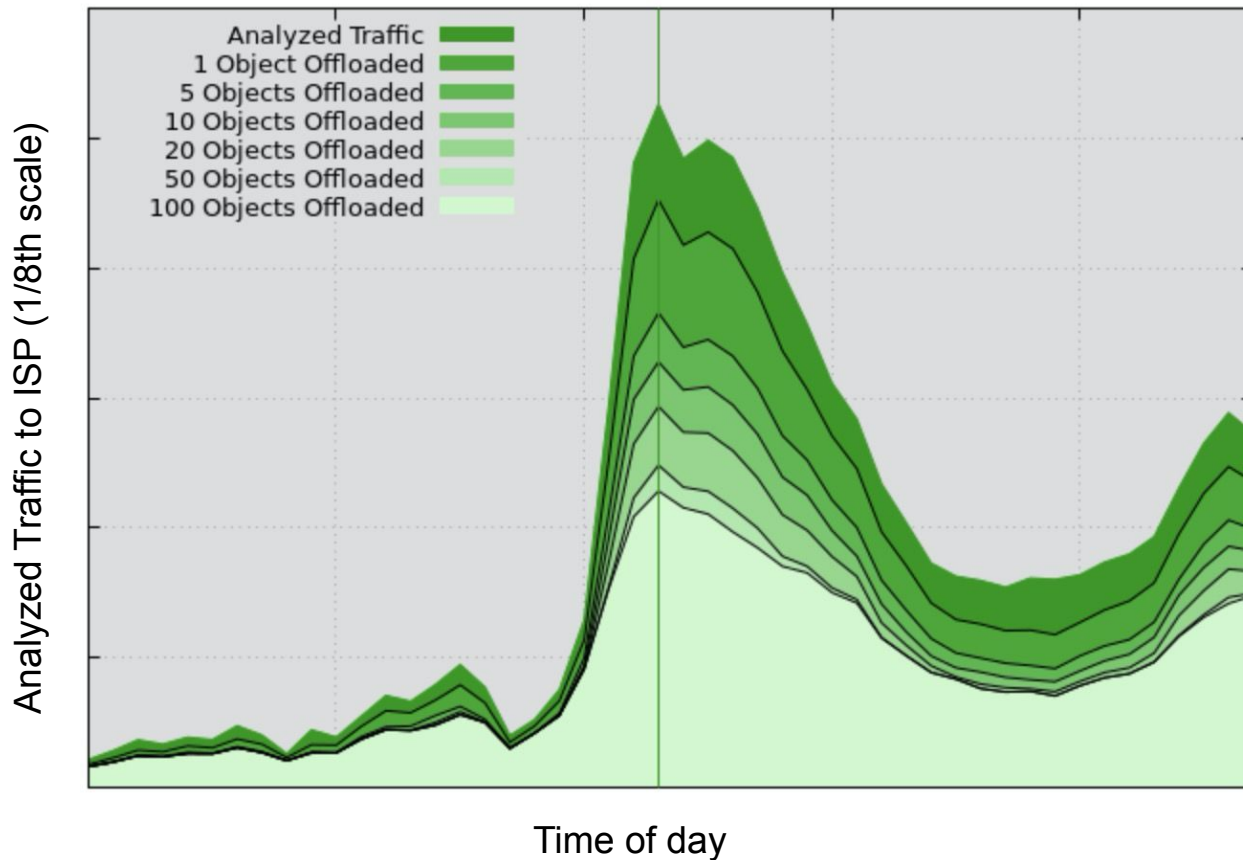


At least ~8% peak reduction feasible (modeled from logs)

- 1 ISP
- 1 normal day*
- Just a few customers

*: data pipeline troubles in front half, but we think ok thru the peak. (analysis work still in progress)

Offload Potential (Ongoing Eval)



- Conservative model
- Long tails
- Unanalyzed content will (probably) expand this once included
- Projected to be much bigger for peak days

*NB: early view of work in progress

Browser Implementation

- Hit a process wall upstreaming to Chromium
 - Too big and insecure to slide in easily
 - Planning to carry a fork until we sort it out
 - Routinely updated rebase+.debs starting in 2-ish weeks
 - Negotiations ongoing
 - More **public web-dev** support would help
 - discourse.wicg.io/t/proposal-multicastreceiver-api/3939
- MNAT(egress) coming before AMBI
 - Easier and More Urgent
- Follow and contribute: github.com/GrumpyOldTroll/chromium

MNAT Implementation

- Prototype operational
 - Kinda slow (~12s join delay)
- Installed in 3 trial partner labs
- IPv6 support for local (S,G) assignments (not yet for global SGs)

Follow and contribute: github.com/GrumpyOldTroll/mnat

Ingest Platform Implementation

- Rudimentary CBACC implemented
- Componentized via “joinfile” to manage joined (S,G) state
 - DRIAD+AMT ingest now tested with several drivers:
 - MNAT-ingress
 - “pimwatch” (watch PIM and respond)
 - CBACC
 - CBACC also componentized on joinfile
 - Other customizations hopefully straightforward

Follow and contribute: github.com/GrumpyOldTroll/multicast-ingest-platform

Doc Updates

- [DORMS+CBACC](#)
 - early review request sent to YANG doctors
- [CBACC](#)
 - Container moved up 1 from metadata/sender/group/port
 - Probably should change max-bits-per-second (uint32 in bps)
 - Might need to change “priority” concept
 - Not a well-formed ordering in the fairness function. TBD added.
- [MNAT](#)
 - Adopted, thanks all those who commented!
- [AMBI](#)
 - Still part of the plan, pending implementation hurdles & trials.
 - NB: Might still need to resurrect ALTA

Next Steps

- Take trials public (probably)
 - Maintain up-to-date browser builds
 - Maintain active streams with useful content
 - Make a mailing list and project website
 - Maybe attempt native delivery in I2
- Flesh out file delivery
 - Publish downloader and/or get a FLUTE stream working
 - Maybe try extending apt?
- Engage some big game delivery partners
- Solve Chromium hurdles or switch browsers
- Ship DORMS and maybe CBACC soon-ish
 - Biggest DORMS question to me: are push-updates feasible as-is?